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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/041,094	12/28/2001	Sunil Palakodati	10541-183	2388

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EXAMINER

WINNER, TONY H

ART UNIT

PAPER NUMBER

3611

DATE MAILED: 02/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
10/041,094

Applicant(s)
Palakodati et al.

Examiner
Tony H. Winner

Art Unit
3611



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Dec 28, 2001
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6 and 7 6) ☐ Other:

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DETAILED ACTION

Drawings

1. Figures 1-3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Whitney (US 626,515).

Whitney discloses a roller pinion gear comprising:

- a. A roller wheel (A2) having plurality of radially projecting teeth (T),
- b. Pin rotatably mounted in and projecting from the periphery,
- c. A pinion shaft (B) coupled to the roller wheel.

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Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheng (US 6,164,407) and in view of Whitney.

Cheng discloses an electric power steering system comprising:

- a. An assist pinion (fig 1) with first and second ends,
- b. First end may engage a rack (40),
- c. Second end is coupled to the pinion gear (64),
- d. An electric motor (Fig 3) having a rotating output shaft and the shaft is coupled to the pinion gear.

Cheng lacks the teaching of a roller pinion gear with plurality of radially projecting teeth.

Whitney is disclosed above teaching the use of roller pinion gear so as to reduce the friction between two meshing gears.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the steering gear of Cheng as taught by Whitney to include a roller

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pinion gear. Such a modification would provide means to reduce friction between two meshing gears.

With respect to claims 4-5, 9, and 11-12, Cheng as modified by Whitney meets all of the claimed limitations.

With respect to claims 6 and 7, Cheng as modified by Whitney discloses the claimed invention except for the range of the gear ratio. It would have been obvious to one having ordinary skill in the art at the time the invention was made to optimize the gear ration between the roller screw and the assist pinion, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

The reasoning of rejection is also applied to claims 7-8, 13-15, and 17.

With respect to claims 18-19, Cheng as modified by Whitney meets all of the method claimed limitations.

The method and reasoning of rejection for claims 20-22 is the same as claims 6 and 7 above.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. F'Geppert ('716), Nemoto ('586), Mayfield ('817), and McCartin ('990) are cited of interest.

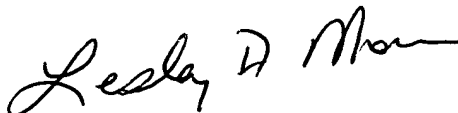
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Any inquiry concerning this communication or earlier communication from the examiner should be directed to Tony Winner whose telephone number is (703) 306-5957. The examiner can normally be reached on Monday-Friday from 9:30 am to 6:00 pm.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.


TONY WINNER
PATENT EXAMINER

January 22, 2003


Lesley D. Morris
~~Primary Examiner~~
SPEA 2611